

**PENGARUH METODE LATIHAN DAN MOTOR ABILITY TERHADAP
PENINGKATAN COMPLEX MOTOR SKILL DALAM SEPAKBOLA**

TESIS

**Diajukan untuk Memenuhi Sebagian dari Syarat Memperoleh Gelar Magister
Pendidikan Program Studi Pendidikan Olahraga**



**Oleh :
REKI SIAGA AGUSTINA
1707806**

**PROGRAM STUDI PENDIDIKAN OLAAHRAGA
SEKOLAH PASCA SARJANA
UNIVERSITAS PENDIDIKAN INDONESIA
2019**

PENGARUH METODE LATIHAN DAN MOTOR ABILITY TERHADAP PENINGKATAN COMPLEX MOTOR SKILL DALAM SEPAKBOLA

Oleh
Reki Siaga Agustina

S.Pd UPI Bandung, 2011

Sebuah Tesis yang diajukan untuk memenuhi salah satu syarat memperoleh gelar Magister Pendidikan (M.Pd.) pada Pendidikan Olahraga

© Reki Siaga Agustina, 2019
Universitas Pendidikan Indonesia
Agustus 2019

Hak Cipta dilindungi undang-undang.
Tesis ini tidak boleh diperbanyak seluruhnya atau sebagian,
dengan dicetak ulang, difoto kopi, atau cara lainnya tanpa ijin dari penulis.

REKI SIAGA AGUSTINA

PENGARUH METODE LATIHAN DAN MOTOR ABILITY TERHADAP
PENINGKATAN COMPLEX MOTOR SKILL DALAM SEPAKBOLA

Disetujui dan disahkan oleh pembimbing:

Pembimbing I



Dr. Hj. Tite Juliantine, M.Pd
NIP. 196807071992032001

Pembimbing II



Dr. Agus Mahendra M.A
NIP. 196308241989031002

Mengetahui,
Ketua Program Studi Pendidikan Olahraga



Dr. Amung Ma'mun, M.Pd
NIP. 196001191986031002

ABSTRAK

Tesis dengan Judul: “Pengaruh Metode Latihan Dan Motor Ability Terhadap Complex Motor Skill Dalam Sepakbola”. Penelitian ini bertujuan mengetahui interaksi metode latihan (*distributedpractise* dan *massed practise*) dan *motor ability* terhadap *complex motor skill* dalam sepakbola. Penelitian ini menggunakan metode eksperimen dengan rancangan faktorial 2x2. Sampel penelitian berjumlah 28 orang. Teknik pengambilan data *motor ability* dengan menggunakan *barrow motor ability test* dan keterampilan *compelx motor skill* sepakbola menggunakan *Wall volley-Test*. Teknik analisis data menggunakan analisis varian (anava) rancangan 2 jalur dan pengujian hipotesis dilakukan dengan uji *tukey* pada taraf signifikansi $\alpha=0,05$. Hasil penelitian dapat disimpulkan sebagai berikut 1) Tidak terdapat perbedaan yang signifikan penggunaan metode latihan padat dan distribusi terhadap peningkatan complex motor skill dalam sepakbola 2) Terdapat pengaruh interaksi yang signifikan antara metode latihan dan *motor ability* terhadap peningkatan keterampilan *complex motor skill* dalam sepakbola 3) Atlet yang memiliki *motor ability* tinggi lebih cocok jika mendapat latihan *distributed practise*, dan 4) Atlet yang memiliki *motor ability* rendah lebih cocok jika mendapat latihan *massed practise*

Kata kunci: Metode Latihan, Metode latihan padat, Metode latihan distribusi, sepakbola.

ABSTRAK

Thesis with the title: "The Effect of Training Methods and Motor Ability on Motor Skills Complex in Football". This study discusses the interaction of training methods and the practice of motor skills with complex motor skills in football. This study uses an experimental method by designing factorial 2x2. The research sample was 28 people. The technique of collecting data on motor ability by using motorbike ability test and complex motorbike skill using Wall volley-Test. The data analysis technique uses analysis of variance (ANAVA) 2-path design and hypothesis testing conducted by Tukey test at the significance level $\alpha = 0.05$. The results of the study can be concluded as follows 1) There is no significant difference in the use of solid training methods and the distribution of increasing complex motor skills in football 2) A significant comparison of interactions between training methods and motor ability on increasing complex motor skills is required 3) Athletes who have higher motor skills are suitable if they get distributed training, and 4) Athletes who have low motor skills that are more suitable if they get mass training

Keywords: Training Methods, distributed practice, massed practice, soccer.

DAFTAR ISI

	Halaman
ABSTRAK	i
ABSTRACT	ii
KATA PENGANTAR	iii
DAFTAR ISI	vi
DAFTAR TABEL	viii
DAFTAR GAMBAR	ix
DAFTAR LAMPIRAN	x
BAB I PENDAHULUAN	1
1.1 Latar Belakang	1
1.2 Identifikasi Masalah Penelitian	6
1.3 Rumusan Masalah	6
1.4 Tujuan Penelitian	7
1.5 Manfaat Penelitian	7
BAB III TINJAUAN TEORITIS	8
2.1 Hakikat Latihan	8
2.1.1 Definisi Latihan	8
2.1.2 Aspek-Aspek Latihan	9
2.1.3 Prinsip dan Asas latihan	10
2.2 Metode Latihan	16
2.2.1 Metode latihan Padat	17
2.2.1.1 Tahapan Latihan Metode Padat	18
2.2.2 Metode Latihan Distribusi	19
2.2.1.1 Tahapan Latihan Metode Distribusi	20
2.3 Perbedaan Metode Latihan Padat dan Distribusi	21
2.4 Kelebihan dan Kelemahan Metode Latihan Padat	23
2.5 Kelebihan dan Kelemahan Metode Latihan Distribusi	24
2.6 Penguasaan Keterampilan	25
2.7 Hakekat Kemampuan Motorik	28

2.8 Complex Motor Skill	33
2.9 Kick Volley	36
2.10 Penelitian Terdahulu Yang Relevan	39
2.11 Kerangka Berpikir.....	42
2.12 Hipotesis	50
BAB III METODOLOGI PENELITIAN	51
3.1 Metode dan Desain Penelitian	51
3.2 Lokasi, Populasi dan Sample Penelitian	51
3.3 Instrumen Peneelitan.....	53
3.4 Teknik Pengumpulan Data.....	57
3.5 Analisi Data	61
BAB IV HASIL PENELITIAN DAN PEMBAHASAN	65
4.1 Hasil Penelitian.....	65
4.2 Hasil Perhitungan Uji Normalitas	78
4.3 Hasil Perhitungan Uji Homogenitas	79
4.4 Pengujian Hipotesis	80
4.5 Pembahasan Hasil Penelitian.....	79
BAB V KESIMPULAN DAN SARAN.....	94
5.1 Kesimpulan	94
5.2 Implikasi	95
5.3 Saran	95
DAFTAR PUSTAKA.....	96
LAMPIRAN-LAMPIRAN	83
RIWAYAT HIDUP.....	226

DAFTAR PUSTAKA

- ... (special olympics). (2004). *Teaching Football Skills*.
- Abd El Maqsood, A., 1997. *Physical training theories, power physiology drills*. Markaz El Kitaab, Cairo, pp: 96
- Ahmadvand, R., Miar, S., Kiani, A., & Shojae, M. (2016). The effect of mass & distributed practice on and complex skills in volleyball, 2(3), 49–55.
- Ali, A. (2017). Measuring soccer skill performance : A review Measuring soccer skill performance : a review, (November). <https://doi.org/10.1111/j.1600-0838.2010.01256.x>
- Alief Lam Akhmady. (2015). The influence of training method and motor ability toward long jump ability.
- Ashraf abdel aziz ahmed ali. (2010). The Impact of a Training Program of Complex Skills and Vision Drills on Specific Visual Abilities and Quick and Accurate Motor Performance in Football Juniors. *World Journal of Sport Sciences*, 3(s), 750–764.
- B. T. DAVIES. (2007). A review of “ The Co-ordination and Regulation of Movements ” By N . Bernstein . (Pergamon Press , 1967 .), (March 2015). <https://doi.org/10.1080/00140136808930945>
- Barrow, H. M., & McGee, R. (1964) *A practical approach to measurement in physical education*. Philadelphia: Lea & Febiger.
- Berliana, et al (2008). *Belajar Pembelajaran Dalam Pelatihan Olahraga*. Bandung: FPOK UPI Bandung
- Barry L. Johnson and Jack K. Nelson, *Practical Measurement for Evaluation in Physical Education*, Minneapolis: Burges Publishing company, 1969.
- Bowers & Fox, 1992. *Textbook of contraction conditioning the strength*.
- Brooks G.A. dan Fahey T.D.; 1985.; Exercise Physiology; New York.: Macmillan PublishingCompany.; hal: 321-325,330-338
- Burdick, K. J. (1977). Effects of massed and distributed practice on the learning and retention of a novel gross motor skill. Master’s Thesis, Western Illinois University.
- Burton, A. W., & Miller, D. E. (1998) *Movement skill assessment*. Champaign, IL: Human Kinetics.
- Burton, A. W., & Rodgerson, R. W. (2001) *New perspectives on the assessment of movement skills and motor abilities*. Adapted Physical Activity Quarterly, .
- Carron, A. V. (1969). Performance and learning in a discrete motor task under massed vs. distributed practice. *Research Quarterly of the American Association for Health, Physical Education and Recreation*, 40(3), 481–489. <https://doi.org/10.1080/10671188.1969.10614866>
- Campbell, W. R., & Tucker, N. M. (1967) *An introduction to tests and measurement in physical education*. London: G. Bell & Sons

- Dail, T. K., & Christina, R. W. (2004). Distribution of practice and metacognition in learning and long-term retention of a discrete motor task. *Research Quarterly for Exercise and Sport*, 75(2), 148–155. <https://doi.org/10.1080/02701367.2004.10609146>
- Davis, B. et al. (2000) *Physical Education and the Study of Sport*. UK London: Harcourt Publishers Ltd.
- Dreyfus, H. L., & Dreyfus, S. E. (2010). Acquisition of skill. *How Does the Acquisition of Skill Affect Performance*, 29–48. [https://doi.org/10.1016/0003-6870\(70\)90197-3](https://doi.org/10.1016/0003-6870(70)90197-3)
- Drews, R., Chiviacowsky, S., & Wulf, G. (2013). Children's Motor Skill Learning is Influenced by Their Conceptions of Ability. *Journal of Motor Learning and Development*, 1(2), 38–44. <https://doi.org/10.1123/jmld.1.2.38>
- F., B. (1995). Sports skill classification, gender, and perceptual style. *Perceptual and Motor Skills*, 81(2), 611–620. Retrieved from <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=emed3&NEWS=N&AN=8570367>
- FIFA,(2017) *Laws Of The Game*. Zurich, Swis
- Frankel. Et. al. (2012). *How To Design and Evaluate Research In Education*. Library of Congress Cataloging-in-Publication Data
- Fleishman, E. A. (1964) *The structure and measurement of physical fitness*. Englewood Cliffs, NJ: Prentice Hall
- Fox, E.L., Bowers, R.W. and Foss, M.L. (1993) *The Physiological Basis For Exercise and Sport*. 5th Edition, Brown & Benchmark, New York.
- Furley, P. A., & Memmert, D. (2010). The role of working memory in sport. *International Review of Sport and Exercise Psychology*, 3(2), 171–194. <https://doi.org/10.1080/1750984X.2010.526238>
- Galligan, F. et al. (2000) *Advanced PE for Edexcel*. Oxford; Heinemann Educational Publishers
- Garcia JA, Moreno FJ, Reina R, Menayo R, F. J. (2008). Analysis of Effects of Distribution of Practice in. *O Perceptual and Motor Skills*, 107, 261–272. Retrieved from <http://journals.sagepub.com.ezproxy.utas.edu.au/doi/pdf/10.2466/pms.107.1.261-272>
- Gentile, A. M. (2012). A Working Model of Skill Acquisition with Application to Teaching, 6297. <https://doi.org/10.1080/00336297.1972.10519717>
- Hamad, M.I, (2001). *Sport trainer guide in planning and administrating drills*. Dar El Fekr ElArbi, Cairo, pp: 21
- Harsono, (1988). *Coaching dan Aspek-Aspek dalam Coahing*. Jakarta: CV Tambak Kusuma
- Harsono, (2017). *Kepelatihan Olahraga Teori dan Metodologi*. Bandung: PT Remaja Rosdakarya
- Hoare, D. G. (1995) *Talent search: the national talent identification and development program*. Sports Coach, 18, 24-25.

- Hoover, D. L., VanWye, W. R., & Judge, L. W. (2016). Periodization and physical therapy: Bridging the gap between training and rehabilitation. *Physical Therapy in Sport*, 18, 1–20. <https://doi.org/10.1016/j.ptsp.2015.08.003>
- Ibrahim, H., Hear, N. P., & Blanksby, B. (2011). Exploring the General Motor Ability Construct. *Perceptual and Motor Skills*, 113(2), 491–508. <https://doi.org/10.2466/03.06.19.25.PMS.113.5.491-508>
- Ishihara, T., Nunome, H., & Yamamoto, H. (2000). Three dimensional Kinematics of soccer instep kicking – How players change the motion to different height of balls – [In Japanese]. *Medicine and Science in Soccer*, 20, 57 – 60. Lees,
- Izovska, J., Maly, T., Zahalka, F., Izovska, J., Maly, T., & Zahalka, F. (2016). Original Article Relationship between speed and accuracy of instep soccer kick JPES ®, 16(2), 459–464. <https://doi.org/10.7752/jpes.2016.02070>
- Johnson, B. R., & Nelson, J. K. (1986) *Practical measurements for evaluation in physical education*. New York: Macmillan
- Jourkesh, M. (2015). Comparing the effect of massed & distributed practice in different stages of discrete motor task learning.
- Jarver, J. (1981) Procedures of talent identification in the U.S.S.R. *Modern Athlete and Coach*, 20, 3-6
- Kent, M . 1994. *The Oxford Dictionary of Sport Scince and Medicine*. New York: Oxford Univercity Press.
- Kirkendall, Gruber and Johson. 1987. *Measurement and Evaluation for Physical Educators* 2nd ed. Champaign: Human Kinetics Publishers, Inc.
- Kraft, K. P., Steel, K. A., Macmillan, F., Olson, R., & Merom, D. (2015). Why few older adults participate in complex motor skills: A qualitative study of older adults' perceptions of difficulty and challenge. *BMC Public Health*, 15(1). <https://doi.org/10.1186/s12889-015-2501-z>
- Lees, A., Asai, T., Andersen, T. B., Nunome, H., & Sterzing, T. (2010). The biomechanics of kicking in soccer: A review. *Journal of Sports Sciences*, 28(8), 805–817. <https://doi.org/10.1080/02640414.2010.481305>
- Lee, T. D., & Genovese, E. D. (1988). Distribution of practice in motor skill acquisition: Learning and performance effects reconsidered. *Research Quarterly for Exercise and Sport*, 59(4), 277–287. <https://doi.org/10.1080/02701367.1988.10609373>
- Lee, T. D., & Genovese, E. D. (1989). Distribution of Practice in Motor Skill Acquisition: Different Effects for Discrete and Continuous Tasks. *Research Quarterly for Exercise and Sport*, 60(1), 59–65. <https://doi.org/10.1080/02701367.1989.10607414>

- Lees, A., Asai, T., Andersen, T. B., Nunome, H., & Sterzing, T. (n.d.). The biomechanics of kicking in soccer : A review, (April 2013), 37–41.
<https://doi.org/10.1080/02640414.2010.481305>
- Levanon, J., and Dapena, J. (1998). Comparison of the kinematics of the full-instep kick and pass kicks in soccer. *Medicine & Science in Sports & Exercise*, 30, 917 – 927.
- Lotfi, G., Baghaeyan, M., & Baghaee, N. (2019). The impact of variability and distribution of practice on student's learning of basketball throw skill. *Pedagogics, Psychology, Medical-Biological Problems of Physical Training and Sports*, 23(1), 14–18.
<https://doi.org/10.15561/18189172.2019.0102>
- Lutan, Rusli. 1988. *Belajar Keterampilan Motorik*. Jakarta : Depdikbud, Dirjen Dikti
- Lutan, R. *et al* (2007). *Modul Penelitian Dalam Pelatihan Olahraga*. Bandung: FPOK UPI Bandung
- Mackenzie, B. (2001) *Skill Classification* [WWW] Available from:
<https://www.brianmac.co.uk/continuum.htm> [Accessed 10/2/2019]
- Magill, R. A. (2001) *Motor learning: concepts and applications*. (6th ed.) Boston, MA: McGraw Hill.
- Magil RA.(2007) *Motor learning, concepts and applications*. Tehran.Published by high institution of education and research of planning and management.
- Mahendra, Agus (2007). *Teori Belajar Mengajar Motorik*. Bandung: FPOK UPI Bandung
- Maksum, Ali. (2012). *Metodologi Penelitian dalam Olahraga*. Surabaya: Unesa University Press
- Mielke, Danny (2007). *Dasar-Dasar Sepak Bola*. Bandung: PT Intan Sejati
- Morrow JR (2006). *Measurement and Evaluation in Human Performance*. Canada: Human Kinetics
- Mutohir, Toho Cholik dan Gusril. 2004. *Perkembangan Motorik Pada Masa Anak-Anak*. Jakarta: Direktorat Jendral Olahraga
- Mutohir, Toho Cholik dan Gusril. (2004). *Perkembangan Motorik Pada Masa Anak-Anak*. Proyek Pengembangan dan Keserasian Kebijakan Olahraga Direktorat Jenderal Olahraga Departemen Pendidikan Nasional.
- Murray, S. R., & Udermann, B. E. (2003). Massed versus Distributed Practice: Which is Better? *California Association for Health, Physical Education, Recreation, and Dance*, 28(1), 19–22. <https://doi.org/10.1021/ie5032502>
- Nunome, H., Asai, T., Ikegami, Y., and Sakurai, S. (2002). Three-dimensional kinetic analysis of side-foot and instep soccer kicks. *Medicine & Science in Sports & Exercise*, 34, 2028 – 2036. <https://doi.org/10.1249/01.MSS.0000039076.43492.EF>

Newell KM. Coordination, (1985), *control, and skill*. In D. Goodman, R. B. Wilberg, & I. M. franks (Eds), *Differing perspectives in motor learning, memory and control* (pp. 295-317). Amsterdam: North-Holland.

Nishimura, A., Ono, T., Nuno, K. & Nakayama, M. (2010) *JFA U-14 Coaching Guidance 2010*

Ono, T. (1998) *Upbringing of soccer player from long-term vision. Coaching for Creative Football*. Taishukan-Bookstore: Tokyo

Ono, T., Nuno, K., Ueda, E. & Kazama, Y. (2007) *Soccer Coaching Book 2007*. Japan Football Association: Tokyo (in Japanese).

Oxford Reference

<http://www.oxfordreference.com/view/10.1093/oi/authority.20111228145525580>

[Accessed 10/2/2019]

Radosevich, D. J., & Donovan, J. J. (1999). A meta-analytic review of the distribution of practice effect: Now you see it, now you don't. *Journal of Applied Psychology*, 84(5), 795–805.

Reddingschools, <http://reddingschools.net/wp-content/uploads/2015/07/APPLY-Skills-and-Techniques.pdf> [Accessed 10/2/2019]

Regnier, G., Salmela, J. H., & Russell, J. H. (1993) Talent detection and development in sport. In R. N. Singer, M. Murphey, & L. K. Tennants (Eds.), *Handbook of research in sport psychology*. New York: Macmillan. Pp. 528-541.

Rushall, B. S., & Pyke, F. S. (1990). *Training for sports and Fitness*.

Melbourne, Australia: Macmillan Educational.

Satria, *et al.* (2007). *Modul Metodologi Kepelatihan Olahraga*. Bandung: FPOK UPI Bandung

Sage, G. H. (1984) *Motor learning and control: a neuropsychological approach*. Dubuque, IA: W. C. B. Brown.

Sharkey, B J. 2003. *Kebugaran dan Kesehatan*. Raja Grafindo Persada. Jakarta.

Schmidt RA, Lee TD,(1999): *Motor control and learning Human Kinetics*, 3ed, pp, 292-298, 1999

Schmidt RA.(2005) *Learning and performance, from principle to practice*. Translated by Mehdi Namzi Zade and Seyed Mohamad Kaem Vaez Mousavi. Tehran, SAMT publications, 2005

Schmidt, R. A., & Lee, T. D. (2005) *Motor control and learning: a behavioral emphasis*. (4th ed.) Champaign, IL: Human Kinetics.

- Seabrook, R., Brown, G. D. A., & Solity, J. E. (2005). Distributed and massed practice: From laboratory to classroom. *Applied Cognitive Psychology*, 19(1), 107–122.
<https://doi.org/10.1002/acp.1066>
- Shusei Sugi, Hiroyuki Nunome, Y. T. and T. I. (2017). *a Three-Dimensional Kinematics on Contribution of Effective Lower Body Segment Rotations in Producing Foot Velocity in Soccer Volley Kicking*, 1–4.
- Shinki, H., and Isokawa, M. (2004). Analysis of soccer volley kicking – How players change the motion to different height of balls – [in Japanese]. *Japanese Journal of Fitness & Sports Medicine*, 53, 860.
- Singer, R. N. (1965). Massed and distributed practice effects on the acquisition and retention of a novel basketball skill. *Research Quarterly of the American Association for Health, Physical Education and Recreation*, 36(1), 68–77.
<https://doi.org/10.1080/10671188.1965.10614658>
- Singer, R. N. (1966) Comparison of inter-limb skill achievement in performing a motor skill. *Research Quarterly*, 27, 405-410.
- Special Olympic
<http://media.specialolympics.org/soi/files/sports/Football+Coaching+Guide.pdf>
 [Accessed 10/2/2019]
- Suharsimin, A. (2006). *Prosedur Penelitian Ilmiah Suatu Pendekatan Praktik*. Jakarta: Rineka Cipta
- Sudjana. 2005. *Metode Statistika Edisi ke-6*. Bandung : Tarsito
- Sukadiyanto. 2002. *Pengantar Teori dan Metodologi Melatih Fisik*. Yogyakarta: PKO FIK UNY
- Taylor, J. A., & Ivry, R. B. (2012). The role of strategies in motor learning. *Annals of the New York Academy of Sciences*, 1251(1), 1–12. <https://doi.org/10.1111/j.1749-6632.2011.06430.x>
- Trimac M, (2007) *Acquisition and performance of sport skills*. Tehran, Bamdad Ketab, 2007.
- Shinki, H., and Isokawa, M. (2004). Analysis of soccer volley kicking – How players change the motion to different height of balls – [in Japanese]. *Japanese Journal of Fitness & Sports Medicine*, 53, 860.
- Umar, F., Tangkudung, J., & Asmawi, M. (2017). the Developments of Motor Ability Exercise Models for Cerebral Palsy Football Players With Circuit Method. *European Journal of Physical Education and Sport Science*, 3(7), 91–102.
<https://doi.org/10.5281/zenodo.822480>
- UPI, (2018). *Pedoman Penulisan Karya Ilmiah*. Bandung: Universitas Pendidikan Indonesia.
- Vanderford ML, Meyers MC, Skelly WA, Stewart CC, Hamilton KL. Physiological and sport-specific skill response of Olympic youth soccer athletes. *J Strength Cond Res* 2004; 18: 334–342.
- Whitley, J. D. (1970). Effects of practice distribution on learning a fine motor task. *The Research Quarterly*, 41(4), 576-583.

- Wulf, G., Mcnevin, N., & Charles, H. (2010). The Quarterly Journal of Experimental Psychology Section A : Human Experimental Psychology The automaticity of complex motor skill learning as a function of attentional focus, (May 2015), 37–41. <https://doi.org/10.1080/713756012>
- Wulf, G., Wulf, G., Mcnevin, N. H., Fuchs, T., Ritter, F., & Toole, T. (2013). Attentional Focus in Complex Skill Learning Attentional Focus in Complex Skill Learning, (February), 37–41. <https://doi.org/10.1080/02701367.2000.10608903>
- Yamamoto, Y. & Gohara, K. (2000). Continuous hitting movement modeled from the perspective of dynamical systems with temporal input. *Human Movement Science*, 19 (3), 341–371.
- Yamamoto, Y. (2011). An Alternative Approach to the Acquisition of a Complex Motor Skill: Multiple Movement Training on Tennis Strokes. *International Journal of Sport and Health Science*, 2(1981), 169–179. <https://doi.org/10.5432/ijshs.2.169>
- York, A., & Graydon, J. (1991). The effects of massed and distributed practice on the learning and performance of a gross motor task. *Journal of Sports Sciences*, 9(4), 450–451.
- Zafar,Dikdik (...). *Panduan Pelatihan Olahraga untuk Usia Sekolah(6-18 tahun)*,[Online].Tesia:
[http://www.koni.or.id/file/documents/journal/1.%20panduan%20pelatih%20Olahraga%20untuk%20Usia%20sekolah%20\(6-18tahun\).pdf](http://www.koni.or.id/file/documents/journal/1.%20panduan%20pelatih%20Olahraga%20untuk%20Usia%20sekolah%20(6-18tahun).pdf) [20 September 2011]